AMENDMENTS TO THE CLAIMS

The following is a copy of Applicants' claims that identifies language being added with underlining ("___") and language being deleted with strikethrough ("——"), as is applicable:

1.   (Currently amended) A method comprising the steps of:

receiving plural video streams corresponding to a first format and a second

format different than the first format;

encoding in parallel plural digitized pictures of a first picture sequence

corresponding to a first video stream of the plural received video streams

and a second picture sequence corresponding to a second video stream

of the plural received video streams according to a first video

compression specification to produce a transport stream comprising a

multiplex of a corresponding first compressed video stream and a second

video stream, respectively, the first and second video streams having the

first format and the first and second compressed video streams having

the second format;

storing the transport video stream in a storage device;

determining whether the encoded pictures of the first and second compressed

video streams video stream is are to be transcoded according to a first

operating mode or a second operating mode relative to producing the

video stream, the determination based on availability of processing

resources, wherein the first operating mode is implemented in non-real

time and the second operating mode is implemented in real-time; and

transcoding at least a portion of the first compressed video stream or the second

compressed the video stream according to either the first operating mode

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or the second operating mode responsive to a determination regarding

the sufficiency of processing resources.

2.   (Original) The method of claim 1, wherein the method is implemented by a

television set-top terminal.

3-4.   (Cancelled)

5.   (Currently amended) The method of claim 1, further comprising the steps of:

accessing pre-calculated resource estimates corresponding to compressing,

decompressing, or a combination of both tasks pertaining to transcoding

operations corresponding to the stored video stream, the pre-calculated

resource estimates based on worst case conditions for one or more

factors,

wherein the transcoding according to the first operating mode is in non-real time

real-time and the transcoding according to the second operating mode is

in non-real time real time, the determination of which mode to execute

further based on the availability of resources as determined with respect

to the pre-calculated resources.

6.   (Cancelled)

7.   (Previously presented) The method of claim 5, wherein the one or more factors

includes one or more of video compression specification, picture size, picture rate, or

time factor.

8.   (Previously presented) The method of claim 7, wherein the time factor provides a plurality of completion times for non-real time operations.

9.   (Previously presented) The method of claim 1, wherein the transcoding according to the first operating mode is implemented according to a second video specification different than the first video specification.

10-11. (Cancelled)

12.   (Previously presented) The method of claim 1, wherein the processing resources comprise one or more of an instruction execution resource, bus bandwidth, memory capacity, storage capacity, or access to storage capacity.

13-16. (Cancelled)

17.   (Previously presented) The method of claim 1, wherein the transcoding according to the second operating mode is according to the first video specification.

18.   (Currently amended) The method of claim 1, wherein the first operating mode corresponds to a first bit rate and the second operating mode corresponds to a second bit rate different than the first ~~but~~ bit rate.

19.   (Previously presented) The method of claim 1, further comprising the step of:

          monitoring consumption of the processing resources over an extended time

                    period for different time intervals for respective operations that are

                    currently executing and scheduled to be executed at a future time.

20.   (Cancelled)

21.   (Previously presented) The method of claim 19, wherein the step of monitoring

consumption of the processing resources comprises monitoring user input.

22.   (Previously presented) The method of claim 1, wherein the determination is

further based on one or more characteristics of the video stream.

23.   (Previously presented) A set-top terminal (STT) comprising:

an encoder configured to compress plural digitized pictures of a picture sequence

according to a first video compression specification to produce a video

stream;

determine logic configured to determine whether the video stream is to be

transcoded according to a first operating mode or a second operating

mode relative to producing the video stream, the determination based on

availability of processing resources; and

transcode logic configured to transcode the video stream according to either the

first operating mode or the second operating mode responsive to a

determination regarding the sufficiency of processing resources.

24.   (Previously presented) The STT of claim 23, wherein the first operating mode

corresponds to a higher compression rate than the second operating mode.

25.   (Previously presented) The STT of claim 23, wherein the second operating

mode corresponds to an MPEG-2 video compression specification and the first operating

mode corresponds to an H.264 video compression specification.

26-40. (Cancelled)

41.   (Previously presented) The STT of claim 23, wherein the STT is integrated in a

subscriber television system.

42.   (Previously presented) The STT of claim 23, wherein the first operating mode is

implemented in non-real time and the second operating mode is implemented in real-

time.

43.   (Currently amended) The STT of claim 23, wherein the determine logic is further

configured to:

       access pre-calculated resource estimates corresponding to compressing,

              decompressing, or a combination of both tasks pertaining to transcoding

              operations corresponding to the stored video stream, the pre-calculated

              resource estimates based on worst case conditions for one or more

              factors,

       wherein the transcode logic is further configured to transcode according to the

              first operating mode in non-real time real-time and according to the

              second operating mode in real time non-real time, the determination of

              which operating mode to execute further based on the availability of

              resources as determined with respect to the pre-calculated resources.

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44.   (Previously presented) The STT of claim 43, wherein the one or more factors includes one or more of video compression specification, picture size, picture rate, or time factor.

45.   (Previously presented) The STT of claim 44, wherein the time factor provides a plurality of completion times for non-real time operations.

46.   (Currently amended) The STT of claim 23, wherein the transcode logic is further configured to transcode according to the first operating mode <u>implemented</u> according to a second video specification different than the first video specification.

47.   (Previously presented) The STT of claim 23, wherein the processing resources comprise one or more of an instruction execution resource, bus bandwidth, memory capacity, storage capacity, or access to storage capacity.

48-50. (Canceled).

51.   (Previously presented) The STT of claim 23, wherein the second operating mode is according to the first video specification.

52.   (Previously presented) The STT of claim 23, wherein the first operating mode corresponds to a first bit rate and the second operating mode corresponds to a second bit rate different than the first bit rate.

53.   (Previously presented) The STT of claim 23, wherein the determine logic is

further configured to:

        monitor consumption of the processing resources over an extended time period

                for different time intervals for respective operations that are currently

                executing and scheduled to be executed at a future time.

54.   (Previously presented) The STT of claim 53, wherein the monitoring comprises

monitoring user input.

55.   (Previously presented) The STT of claim 23, wherein the determination is

further based on one or more characteristics of the video stream.

56.   (New) The method of claim 1, wherein transcoding comprises accessing in

parallel the first and second compressed video streams, decompressing in parallel the

encoded pictures of the first and second compressed video streams, and compressing

the first compressed video stream according to the second format at a reduced bit rate

and compressing the second compressed video stream according to a third format

different than the first and second formats.

57.   (New) The method of claim 56, wherein the first format corresponds to analog

video, and the second and third formats correspond to different video compression

specifications.

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58.   (New) The method of claim 1, wherein transcoding comprises accessing the portion of the first compressed video stream, decompressing the portion, and compressing the decompressed portion according to a third format different than the first and second formats, and storing the transcoded portion having the third format in the storage device.

59.   (New) The method of claim 58, further comprising accessing and decompressing the transcoded portion and non-transcoded portions of the first compressed video stream and presenting as decompressed pictures for display.

60.   (New) The method of claim 58, wherein the first format corresponds to analog video, and the second and third formats correspond to different video compression specifications.

61.   (New) The method of claim 1, wherein encoding further comprising encoding audio corresponding respectively to the first and second video streams and multiplexing the encoded audio in the transport stream.

62.   (New) The STT of claim 23, further comprising a multiplexer, wherein the encoder is further configured to:

    receive, in parallel to the plural digitized pictures, second plural digitized pictures of a second picture sequence and compressed pictures, the received pictures corresponding to a first format; and

    further compress, in parallel to the plural digitized pictures of the picture sequence, the second plural digitized pictures of the second picture sequence to produce, in association with the multiplexer, a transport stream comprising a multiplex of

the video stream and the compressed second plural digitized pictures, the transport stream pictures corresponding to a second format different than the first.

63.   (New) The STT of claim 23, wherein the transcode logic is further configured to access in parallel the video streams of the transport stream, decompress in parallel the compressed pictures of the video stream and the compressed second plural digitized pictures, and compress the decompressed pictures of the video stream according to the second format at a reduced bit rate and compress the decompressed second plural digitized pictures according to a third format different than the first and second formats.

64.   (New) The STT of claim 63, wherein the first format corresponds to analog video, and the second and third formats correspond to different video compression specifications.

65.   (New) The STT of claim 23, wherein the transcode logic is further configured to access a portion of the video stream, decompress the portion, compress the decompressed portion according to a third format different than the first and second formats, and store the transcoded portion having the third format in a storage device.

66.   (New) The STT of claim 65, further comprising accessing and decompressing the transcoded portion and non-transcoded portions of the video stream and present as decompressed pictures for display.

67.   (New) The STT of claim 65, wherein the first format corresponds to analog video, and the second and third formats correspond to different video compression specifications.

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68.   (New) The STT of claim 23, wherein the encoder is further configured to

compress audio corresponding respectively to the video streams of the transport stream,

and wherein the multiplexer is configured to multiplex the compressed audio in the

transport stream.